

AASHTO Guide for Transportation Landscape And Environmental Design

VTrans – 6/16/08

General comments:

VTrans appreciates the opportunity to review and comment on the AASHTO Guide for Transportation Landscape and Environmental Design. VTrans did not spend a lot of time reviewing the examples in chapters 6 and 7, but rather spent it's time on the content of the first five chapters. The overall content of the document is comprehensive, informative and readable, important for audiences outside the landscape architect discipline. Key issues that VTrans has dealt with such as light pollution, wildlife crossing, habitat connectivity, porous pavement, water quality, and the synergy between storm water treatments and landscape elements were all addressed to various extents throughout the document. The guide contains much useful information that typically would not be considered by highway design engineers and appears in a format that is easy to reference. Although there were few references to specific costs, the cost of long term maintenance was recognized and options to delegate those responsibilities to others outside DOT's were covered well.

Comments on content and editorial/grammar issues follow:

Need consistency in the spelling of buses/busses

The 24 types of roadway class/settings, well documented and described in Chapter 2, were used throughout the document. It appears some settings will overlap and could cause confusion for folks unfamiliar with these concepts. It would be beneficial if the guide could contain some type of checklist (perhaps an appendix) an engineer could fill out for a project that would help determine which class/setting is most represented. That determination is crucial and will determine what landscape elements could be considered and eliminating any guesswork from that decision would increase comfort levels.

Chapters 1 & 2 – no specific comments. Generally well written.

Chapter 3:

1. p. 17, last ¶ before 3.1: the sentences starting with "Only..." do not make sense as written.
2. p.18, under "Safety": first sentence might read "...but rather the change in behavior by people traveling that road." Or something close to that. The 4th sentence needs the word "the" before "road's functional type".
3. P.18, 3rd ¶ under "Safety": I would remove the 2nd "Why" and the sentences which follow: "Why? Because people are not billiard balls. They think. They react.". I'd recommend starting that ¶ with: "Because people understand hazards and respond accordingly." I find this whole paragraph very subjective.
4. p. 18, last ¶ after • **The Context Sensitive Solution**:: the following existing text could be reworked: Avoid bringing up a road to a particular standard to improve safety. Rather evaluate

- where safety problems occur and fix just the problem, saving time and money, reducing social and environmental impacts, and inconveniencing the traveling public less. Could possibly read: "Evaluate where safety problems occur and fix **only** the problem, saving time and money, reducing social and environmental impacts, and inconveniencing the traveling public less."
5. p.19, first ¶, 4th sentence: change "around" to "approximately".
 6. p.19, 2nd ¶, the following existing text could be reworked (see inserts in blue): As long as traffic is moving (fast) **quickly**, freeways seems to work but as the road becomes more congested we try to cope by finding a new route, adjust**ing** our commuting times, or changing jobs or homes.
 7. p.19, 4th ¶, the following existing text does not really make sense and needs to be reworked: Although trips to work may be better understood at an individual level, many trips—such as trips to the grocery store, to the veterinarian, and to the dry cleaners—are typically done per household. The more households, the less efficiently our highway system is used.
 8. p.20, ¶ 6: the following existing text could be reworked (see inserts in blue): The transportation planner should work with community planners to optimize land-use, density, and other community planning factors so **that** the roadway system is not overwhelmed by the demands of adjacent development.
 9. p.20, next to last ¶ need to rewrite the following sentence for clarity: Designing for improved mobility and access for motor vehicles cannot be detrimental to the access already enjoyed by bicyclists and pedestrians, especially access across a major roadway corridor. Perhaps the word "cannot" should be replaced with "should not". Further, the following sentence needs an edit: The roadway planner and designer should examine at the existing transit, bicycle, and pedestrian systems, to determine how the proposed project can help complete or extend these systems. Remove the word "at".
 10. p.20, last ¶, last sentence is awkward and does not have strength.
 11. p.21. first two sentences under heading 3.2 need to be rewritten.
 12. p.21, 4th ¶, first and 2nd sentences needs to be rewritten.
 13. p.21, 2nd to last ¶, the existing text should be reworked (see inserts in blue): "Most importantly, a perpetual advisory committee would **advocate** (become advocates) for not only their corridor and the open planning..."
 14. p.21, last ¶, the existing text should be reworked (see inserts in blue): "In particular, a perpetual advisory committee would be in the unique position to offer elected officials a candid assessment of the value **that** (of) the state's transportation program has had for their community."
 15. p.22, last sentence of 1st ¶, the existing text should be reworked (see inserts in blue): "Be willing to extend the life of the Advisory Committee past construction into operations and maintenance so **that** they become an advocate for the corridor, the transportation agency, and the state's transportation program."
 16. p.22, Section 3.3 needs to be rewritten.
 17. p.23, Section 3.4 Financial Feasibility, first sentence, the existing text should be reworked (see inserts in blue): "Across the country, costs for materials and construction are escalating out of **proportion** (portion) to the ability of agencies to secure funding."
 18. p.23, Section 3.4 Financial Feasibility, 2nd ¶, the existing text should be reworked (see inserts in blue): "When the vehicle is filled with gas, the smart box tells the pump (which relays the message) **which** (what) roads were used and proportionally which transportation authority should get the fuel taxes, adjusted for congestion, it is now being charged." Sentence needs to be reworked at the end.
 19. p.23, Section 3.4 Financial Feasibility, 3rd ¶ needs to be rewritten.
 20. p.24, 1st sentence of 2nd ¶, the following existing text should be reworked "No one plans, designs, and constructs a roadway so their community will be the worse off for it."
 21. p.24, 3rd ¶, 2nd sentence, in the following existing text, replace 'affect' with 'effect'. The **effect** (affect) was the dividing of many communities.
 22. p.24, 4th ¶ needs to be reworked.

23. p.24, 5th ¶, the existing text should be reworked (see inserts in blue): “A transportation planner and designer must also understand the values and plans that a community has for its development and adjust access and mobility around those plans or work to modify the development plans so **that** both travelers and neighbors benefit. How can the roadway’s aesthetics contribute to a community’s **identity** (identify)? How can it act as a community gateway? **The last sentence needs to be reworked:** How can that economic development be funneled maintain existing institutions and to assure continued community development?”
24. p.24, 6th ¶, last sentence, “Night” does not need to be capitalized.
25. p.24, last ¶, first sentence needs to be reworked.
26. p.25, Conclusion is too short.
27. Resources are not listed in the text or at the end.

Chapter 4:

1. p.29, 1st ¶, first sentence: remove the 2nd “can” after the word “designer”.
2. p. 35, last ¶; substitute the word “that” for the existing word “than”—see blue insert: Vegetation with thorns or other parts **that** (than) can pierce tires should be avoided.”
3. p.37, 4th ¶, the following sentence needs a little re-work to make sense: “Sometimes the desired service area lacks an available right-of-way; however, so light rail then is located in medians, shared right-of-way, or in streets for relatively long distances.”
4. p. 39, 6th ¶, the existing text should be reworked (see inserts in blue): “Because this bridge type has been a standard of CALTRANS, its familiarity **within the** construction industry has made it cost-competitive with precast I beam bridges.
5. p.61, 2nd to last ¶, remove the word highlighted within the existing text: “The scale of right-of-ways associated with roads **the** makes transportation agencies and designers significant players in the environmental health of a region.”
6. p.62, 2nd ¶, first sentence, change highlighted word spelling in existing text: “...some creatures are better discourages along roadways unless...” (Change the’s’ to a’d’).
7. p.62, 4th ¶, the word ‘understand’ or some version of it is used 5 times.
8. p.65, 7th ¶, the word ‘features’ should be singular: “Reducing inputs—chemicals, fertilizer, water, energy—is a key features of sustainability.”
9. p. 67, 2nd ¶, the word ‘their’ probably should be ‘they’: “While native planting communities, be **their** prairies, desert or forest, originally survived beautifully without human intervention, the setting today is very different then 200 years ago.”
10. p. 67, 3rd ¶, sentence needs to be revised, possibly as follows (edit is in blue): “However in arid landscapes **post**-season blooms can look like a mass of dead weeds in summer.”
11. p.74. 5th & 6th ¶, I believe the existing text, “...cast in place concrete...” should be ‘**cast-in-place**’.
12. p.79. 5th ¶, the existing text needs an edit as highlighted: “Colored or subtly textured pavement at crosswalks, however, can cue drivers to slow down.”
13. The section on p. 89 titled “Land Use” would be an excellent overview at the beginning of chapter 4 after the Introduction which should lead into the Land Use section; this would lead the reader from the big-picture to the numerous detailed considerations within the chapter.
14. Proper mulching techniques should be added to the section on maintenance where mulching is discussed. The importance of maintenance agreements should be discussed in terms of successful long-term landscape design components of transportation projects.
15. Seed mix alternatives for varied applications could be discussed under the maintenance or wildflower discussions.
16. Soil bioengineering/structural soil could have more discussion and information in terms of long-term successful plantings.
17. Discussion regarding alternative types of pavements for sidewalks and pedestrian areas could be broader.
18. Alternative stormwater solutions such as Low Impact Development could be discussed further in relation to the design process.

19. Wildlife crossing considerations, as part of design for bridges and underpasses for roadways, as well as barriers to wildlife crossings where appropriate, could be discussed more thoroughly than 1 ¶ on p. 77.
20. Environmental permitting for transportation projects was not discussed; would this be a useful discussion topic?
21. Overall this chapter was well-written and very informative.

Chapter 5 comments:

Page 96 – Roadway – first bullet should read “...expanding an existing freeway,...”

Page 96 – Roadway – third bullet - needs comma after bikes

Page 96 – Roadway Structures – fifth bullet - needs comma after bikes

Page 97 – Roadside Structures – first bullet – needs edits

Page 97 – Roadside Structures – fourth bullet – needs comma after bikes

Page 97 - Outside the Right of Way – third bullet – first sentence needs edit

Page 99 – Roadside Structures – first bullet – change “avoided” to “unnecessary”

Page 100 – Roadside Structures – first bullet – it is not clear what is meant by “should not be common”

Page 103 – Outside the ROW – first bullet – “indentify” should be “identity”

Page 105 – Roadside Structures – fourth bullet – needs comma after bikes

Page 105 – Roadside Structures – sixth bullet – need text added, or delete bullet

Page 105 – Outside the ROW – first bullet – needs rewrite

Page 106 – Roadway – second bullet – need text added, or delete bullet

Page 106 – Roadway – third bullet – bicycle needs to be plural

Page 109 – Outside the ROW – first bullet – mis-spelled word

Page 109 – Outside the ROW – fourth bullet – punctuation

Page 114 - Suburban Expressway Corridors section needs to be completed

Page 118 – Roadway Structures – first bullet – some upper case should be lower case

Page 119 – Roadway Structures – fifth bullet – vegetation tolerance to salt needs to be considered

Page 119 – Roadway Structures – sixth bullet – furnishing should be plural and ?lower case?

Page 122 – Roadway – second bullet – lane should be lanes

Page 123 – Roadway – second bullet – lane should be lanes

Page 129 – Roadway – first bullet – “possible” mis-spelled